

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

Claims 1-41 (canceled)

1                   Claim 42 (new): A method for obtaining expression of a tumor suppressor gene  
2 in a tumor cell in a mammal *in vivo*, wherein the tumor cell is caused by the absence of a tumor  
3 suppressor gene or the presence of a pathologically mutated tumor suppressor gene, the method  
4 comprising:

5                   contacting the tumor cell with an effective amount of a replication-deficient  
6 recombinant adenovirus expression vector comprising: a) a partial or total deletion of a protein  
7 IX-encoding DNA sequence, and b) a gene encoding a foreign protein having a tumor  
8 suppressive function, wherein said contacting comprises intratumoral, peritumoral or  
9 intravesicular injection of the recombinant adenovirus expression vector under suitable  
10 conditions such that the foreign protein is expressed in the tumor cell.

1                   Claim 43 (new): A method of inhibiting the proliferation of a tumor cell in a  
2 mammal, wherein the tumor cell is caused by the absence of a tumor suppressor gene or the  
3 presence of a pathologically mutated tumor suppressor gene, the method comprising:

4                   administering to the mammal an effective amount of a replication-deficient  
5 recombinant adenovirus expression vector comprising: a) a partial or total deletion of a protein  
6 IX-encoding DNA sequence; and b) a gene encoding a foreign functional protein having a tumor  
7 suppressive function under suitable conditions to the animal, wherein said administering  
8 comprises intratumoral, peritumoral or intravesicular injection of the replication-deficient  
9 recombinant adenovirus vector under suitable conditions such that the foreign functional  
10 protein is expressed in the tumor cell.

1                   Claim 44 (new): The method of claim 42 or 43, wherein the tumor suppressor  
2 gene encodes a protein selected from the group p53, p21, p16, Rb, Wilm's tumor WT1 protein,  
3 h-NUC, mitotin and mitotin and p21.

1                   Claim 45 (new): The method of claim 42 or 43, wherein the tumor suppressor  
2 gene encodes p53.

1                   Claim 46 (new): The method of claim 42 or 43, wherein the gene is a suicide  
2 gene.

1                   Claim 47 (new): The method of claim 42 or 43, wherein the tumor cell is a  
2 member selected from the group consisting of non-small cell lung cancer, small cell lung cancer,  
3 hepatocarcinoma, melanoma, retinoblastoma, breast tumor, colorectal carcinoma, leukemia,  
4 lymphoma, brain tumor, cervical carcinoma, sarcoma, prostate tumor, bladder tumor, tumor of  
5 the reticuloendothelial tissues, Wilm's tumor, astrocytoma, glioblastoma, neuroblastoma, ovarian  
6 carcinoma, osteosarcoma, or renal cancer.

1                   Claim 48 (new): The method of claim 42 or 43, wherein deletion of the protein  
2 IX-encoding DNA sequence extends from about 3500 bp from the 5' viral termini to about 4000  
3 bp from the 5' viral termini.

1                   Claim 49 (new): The method of claim 42 or 43, wherein the recombinant  
2 adenovirus expression vector further comprises a deletion of a non-essential DNA sequence in  
3 adenovirus early region 3 or early region 4.

1                   Claim 50 (new): The method of claim 42 or 43, wherein the recombinant  
2 adenovirus expression vector further comprises a deletion of DNA sequences designated  
3 adenovirus E1a and E1b.

1                   Claim 51 (new): The method of claim 42 or 43, wherein the recombinant  
2 adenovirus expression vector further comprises a deletion of early region 3 or 4 and DNA  
3 sequences designated adenovirus E1a and E1b.

1                   Claim 52 (new): The method of claim 42 or 43, wherein the recombinant  
2 adenovirus expression vector further comprises a deletion of up to forty nucleotides positioned 3'  
3 to the E1a deletion, E1b, protein IX deletions, and wherein said foreign functional protein  
4 comprises a polyadenylation signal.

1                   Claim 53 (new): The method of claim 42 or 43, wherein the recombinant  
2 adenovirus expression vector is a Group C adenovirus selected from a serotype 1, 2, 5 or 6.

1                   Claim 54 (new): The method of claim 42 or 43, wherein the recombinant  
2 adenovirus expression vector is selected from the group consisting of A/C/N/53 and A/M/N/53.

1                   Claim 55 (new): The method claim 42 or 43, further comprising administering a  
2 therapeutic agent that controls cell cycle progression and/or induces cell death.

1                   Claim 56 (new): The method of claim 42 or 43, wherein the mammal is a  
2 human.

1                   Claim 57 (new): A method for obtaining expression of a suicide protein in a cell,  
2 the method comprising administering to the cell an effective amount of a recombinant  
3 adenovirus expression vector comprising: a) a partial or total deletion of a protein IX-encoding  
4 DNA sequence, and b) a gene encoding a suicide protein, wherein an mRNA encoding the  
5 suicide protein is produced by the cell.

1                   Claim 58 (new): A method for reducing the proliferation of a tumor cells in a  
2 mammal, the method comprising administering under suitable conditions an effective amount of  
3 an adenoviral expression vector comprising: a) a partial or total deletion of a protein IX-

4 encoding DNA sequence, and b) a gene encoding a suicide protein or a biologically active  
5 fragment thereof; and a therapeutic agent that in the presence of the suicide protein is toxic to the  
6 tumor cell.

1 Claim 59 (new): The method of claim 58, wherein the therapeutic agent is a  
2 thymidine kinase metabolite or a functional equivalent thereof.

1 Claim 60 (new): The method of claim 58, wherein the thymidine kinase  
2 metabolite is ganciclovir or 6-methoxypurine arabinonucleoside or a functional equivalent  
3 thereof.

1 Claim 61 (new): The method of claim 58, wherein the adenoviral expression  
2 vector is administered by injection into the tumor mass.

1 Claim 62 (new): The method of claim 58, wherein the tumor cell is  
2 hepatocellular carcinoma.

1 Claim 63 (new): The method of claim 58, wherein the adenoviral expression  
2 vector is administered directly into the hepatic artery of the subject.

1 Claim 64 (new): The method of claim 58, wherein the cell is present in a  
2 mammal.

1 Claim 65 (new): The method of claim 58, wherein the suicide protein is a  
2 functional thymidine kinase protein, a functional *E. coli* *DEO A* protein, or a functional cytosine  
3 deaminase protein.

1 Claim 66 (new): The method of claim 58, wherein the recombinant adenovirus  
2 expression vector further comprises a deletion of a non-essential DNA sequence in adenovirus  
3 early region 3 or early region 4.

1                   Claim 67 (new): The method of claim 58, wherein the recombinant adenovirus  
2 expression vector further comprises a deletion of DNA sequences designated adenovirus E1a  
3 and E1b.

1                   Claim 68 (new): The method of claim 58, wherein the recombinant adenovirus  
2 expression vector further comprises a deletion of early region 3 or 4 and DNA sequences  
3 designated adenovirus E1a and E1b.

1                   Claim 69 (new): The method of claim 58, wherein the recombinant adenovirus  
2 expression vector further comprises a deletion of up to forty nucleotides positioned 3' to the E1a  
3 deletion, E1b, protein IX deletions, and wherein said foreign functional protein comprises a  
4 polyadenylation signal .

1                   Claim 70 (new): The method of claim 58, wherein the recombinant adenovirus  
2 expression vector is a Group C adenovirus selected from a serotype 1, 2, 5 or 6.

1                   Claim 71 (new): The method of claim 58, wherein the recombinant adenovirus  
2 expression vector is selected from the group consisting of A/C/N/53 or A/M/N/53.

1                   Claim 72 (new): The method claim 58, further comprising administering a  
2 therapeutic agent that controls cell cycle progression and/or induces cell death.

1                   Claim 73 (new): The method of claim 58, wherein the tumor cell is a human  
2 tumor cell.

1                   Claim 74 (new): A kit for reducing the proliferation of tumor cells comprising  
2 the components of the adenoviral expression vector of claim 58, a thymidine kinase metabolite  
3 or functional equivalent thereof, pharmaceutical carriers and instructions for the treatment of  
4 hepatocellular carcinoma using the kit components.